Table S2. Patient characteristics (n=47) for the longitudinal evaluation study. Values are median (IQR) unless otherwise indicated. Symptoms are based on those reported in initial encounter.

Age	62 (44 - 80)
Male, n (%)	29 (62)
Female, n (%)	18 (38)
Race, n (%)	
Black/African American	23 (49)
White/Caucasian	17 (36)
Hispanic/Latino	4 (9)
Asian	2 (4)
Other	1 (2)
Symptoms, n (%)	
Fever	34 (72)
Cough	29 (62)
Difficulty breathing	24 (51)
Muscle/body pain	14 (30)
Chills	9 (19)
Weakness/fatigue	7 (15)
Sore throat	6 (13)
Other	31 (66)
Time since symptom onset	6 (4 - 8)

Table S3. Analytical sensitivity and specificity towards combined IgM and IgG for the evaluated SARS-CoV-2 antibody-based LFAs. LFA results were evaluated against RT-PCR-confirmed results, and reported with a 95% binomial exact CI. McNemar test was used to calculate test performance difference (two-tailed p-values) between the lateral flow assays with the RT-PCR-confirmed results.

Lateral flow assay	vs. PCR Confirmed Results						
	Convalescent Plasma			Pre-pandemic samples			*p*
	Sensitivity (%)	95% CI	N	Specificity (%)	95% CI	N	
All Test	93	80 - 98	40	97	88 - 100	60	1.000
AYTU	83	67 - 93	40	98	91 - 100	60	0.077
Clarity	98	87 - 100	40	90	79 - 96	60	0.131
CoronaChek	95	83 - 99	40	100	94 - 100	60	0.480
Covisure	68	51 - 82	38	95	86 - 99	59	0.039
DNA Link	98	87 - 100	40	80	67 - 89	60	0.006
Nirmidas	93	80 - 98	40	100	94 - 100	60	0.248
Premier Biotech	97	86 - 100	40	100	94 - 100	60	1.000
Ready Result	88	70 - 94	40	97	88 - 100	60	0.450
SafeCare	95	83 - 99	40	90	79 - 96	60	0.289
Sensing Self	88	73 - 96	40	100	94 - 100	60	0.074
Smart Screen	65	48 - 79	40	92	82 - 97	60	0.067
TBG	95	83 - 99	40	88	77 - 95	60	0.182
Wondfo	55	38 - 71	40	98	91 - 100	60	0.0002
Zeus	58	41 - 73	40	97	88 - 100	60	0.001

Table S4. Analytical sensitivity and specificity towards IgM for the evaluated SARS-CoV-2 antibody-based LFAs. LFA results were evaluated against RT-PCR-confirmed results, and reported with a 95% binomial exact CI. McNemar test was used to calculate test performance difference (two-tailed p-values) between the lateral flow assays with the RT-PCR-confirmed results.

Lateral flow assay	vs. PCR results						
	Convalescent Plasma			Pre-pandemic samples			*p*
	Sensitivity (%)	95% CI	N	Specificity (%)	95% CI	N	
All Test	0	0 - 9	40	97	88 - 100	60	< 0.0001
AYTU	45	29 - 62	40	100	94 - 100	60	0.0001
Clarity	83	67 - 93	40	90	79 - 96	60	1.000
CoronaChek	63	46 - 77	40	100	94 - 100	60	0.000
Covisure	66	49 - 80	40	95	86 - 99	60	0.024
DNA Link	83	67 - 93	40	80	67 - 89	60	0.359
Nirmidas	83	59 - 87	40	100	94 - 100	60	0.004
Premier Biotech	87	72 - 96	40	100	94 - 100	60	0.074
Ready Result	85	73 - 96	40	97	88 - 100	60	0.289
SafeCare	78	62 - 89	40	98	91 - 100	60	0.027
Sensing Self	15	6 - 30	40	100	94 - 100	60	0.0001
Smart Screen	60	43 - 75	40	92	82 - 97	60	0.029
TBG	88	73 - 96	40	88	77 - 95	60	0.773
Wondfo	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zeus	35	21 - 53	40	97	88 - 100	60	< 0.0001

Table S5. Analytical sensitivity and specificity towards IgG for the evaluated SARS-CoV-2 antibody-based LFAs. LFA results were evaluated against RT-PCR-confirmed results, and reported with a 95% binomial exact CI. McNemar test was used to calculate test performance difference (two-tailed p-values) between the lateral flow assays with the RT-PCR-confirmed results.

Lateral flow assay	vs. PCR results						
	Convalescent Plasma			Pre-pandemic samples			*p*
	Sensitivity (%)	95% CI	N	Specificity (%)	95% CI	N	
All Test	93	80 - 98	40	100	94 - 100	60	0.248
AYTU	78	62 - 89	40	98	91 - 100	60	0.027
Clarity	65	48 - 79	40	100	94 - 100	60	0.001
CoronaChek	90	76 - 97	40	100	94 - 100	60	0.134
Covisure	68	51 - 82	40	97	88 - 100	60	0.016
DNA Link	95	83 - 99	40	100	94 - 100	60	0.480
Nirmidas	85	80 - 98	40	100	94 - 100	60	0.248
Premier Biotech	92	79 - 98	40	100	94 - 100	60	0.248
Ready Result	88	73 - 96	40	97	88 - 100	60	0.450
SafeCare	93	80 - 98	40	90	79 - 96	60	0.505
Sensing Self	88	73 - 96	40	100	94 - 100	60	0.074
Smart Screen	25	13 - 41	40	100	94 - 100	60	< 0.0001
TBG	95	83 - 99	40	97	88 - 100	60	0.617
Wondfo	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zeus	55	38 - 71	40	100	94 - 100	60	<0.0001

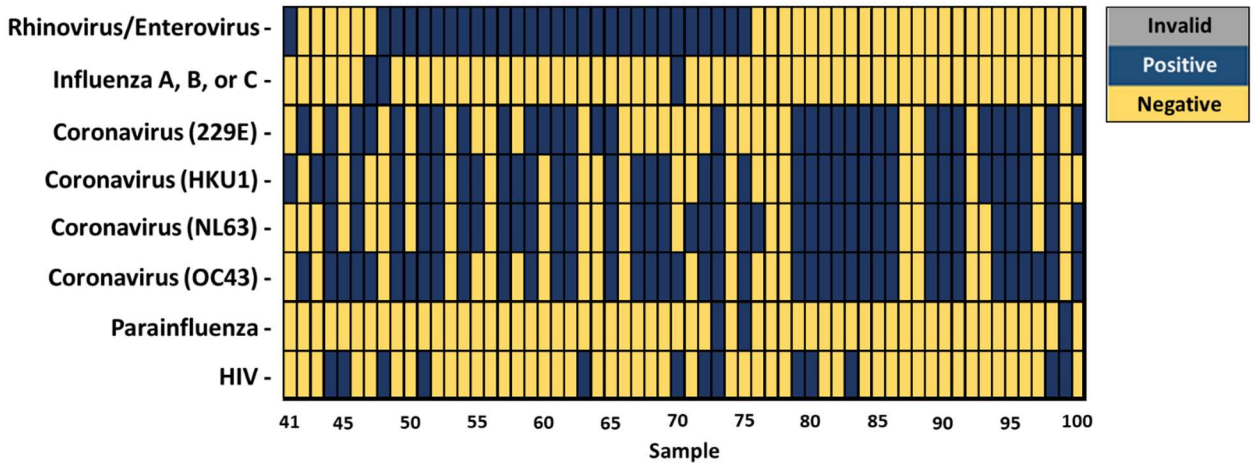

Figure S1. Evaluation of cross-reactivity towards other non-SARS-CoV-2 viruses. LFAs were challenged with pre-pandemic samples obtained between 2016 and 2019 from patients known to be infected with other non-SARS-CoV-2 viruses. Pronounced cross-reactivity is observed towards the different strains for coronaviruses (229E, HKU1, NL63, and OC43), and less so for rhinovirus/enterovirus, influenza A, B, or C, parainfluenza, and HIV.

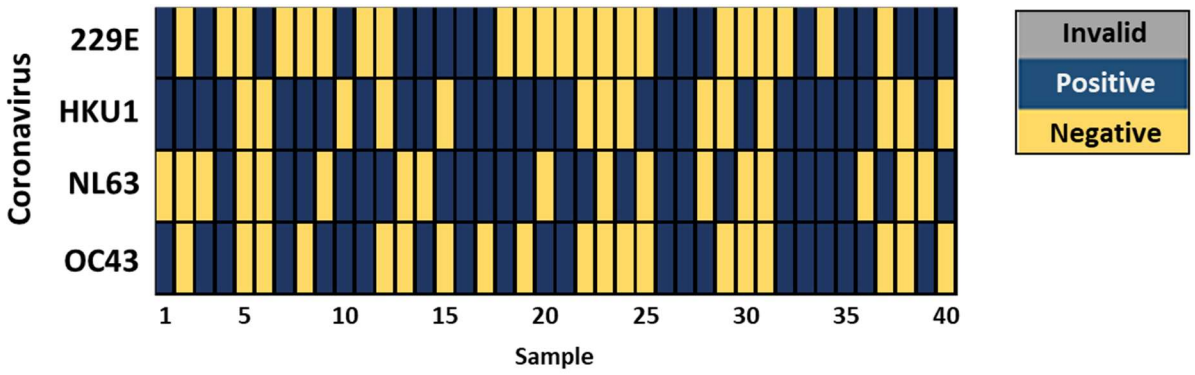

Figure S2. Evaluation for coinfection with non-SARS-CoV-2 coronaviruses for convalescent patients. Samples obtained from patients confirmed to be positive for SARS-CoV-2 via PCR-based testing were evaluated for non-SARS-CoV-2 coronaviruses (229E, HKU1, NL63, and OC43). All but three of the patient were infected with at least one of the four coronavirus strains evaluated (229E, HKU1, NL63, and OC43).

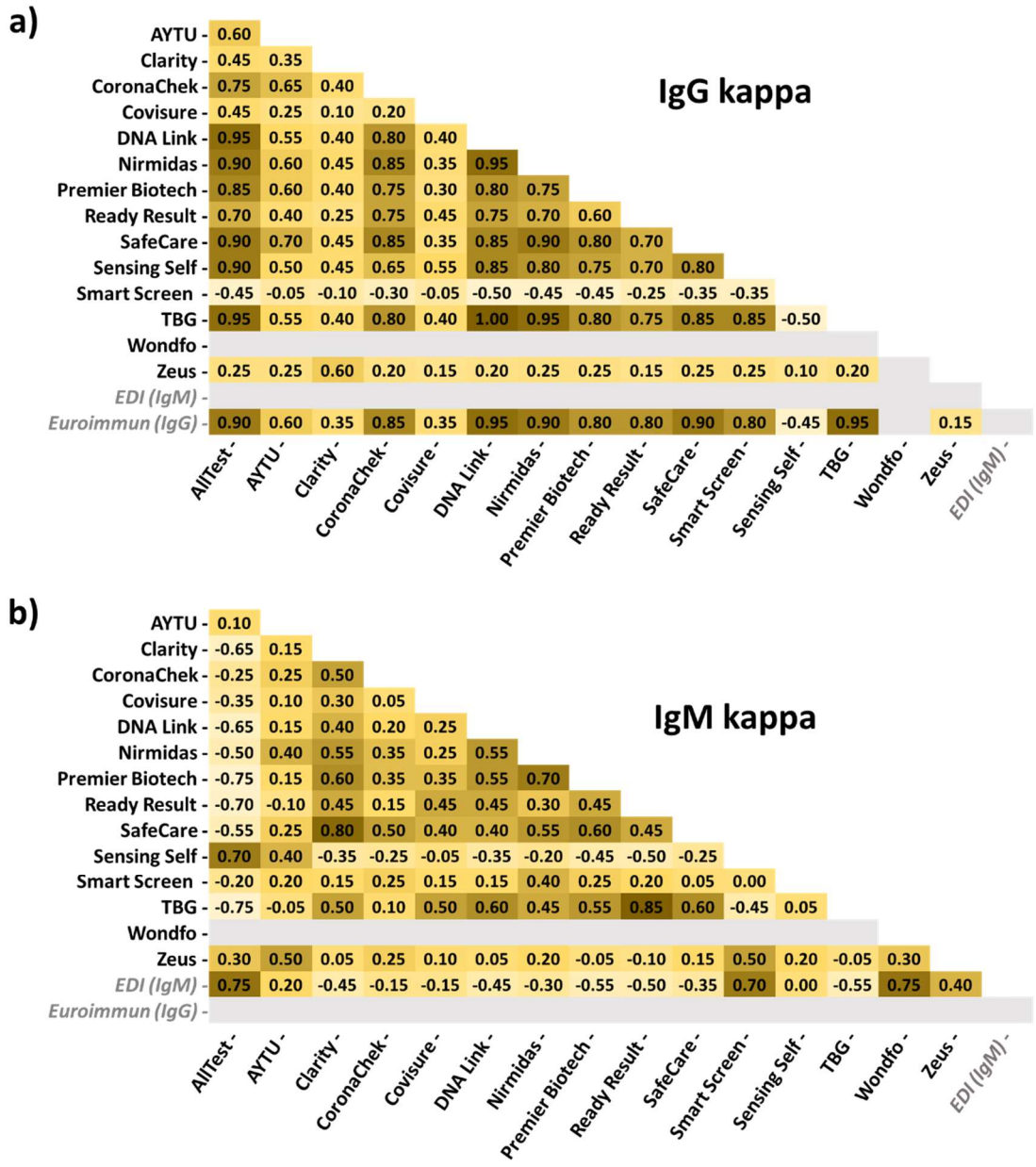

Figure S3. Agreement comparison of a) IgG and b) IgM results between fifteen evaluated LFAs and two ELISA-based tests (in *italics*). Value represents the kappa agreement values, which are interpreted as 'no agreement' (< 0), and 'slight' (0.00 – 0.20), 'fair' (0.021 – 0.40), 'moderate' (0.41 – 0.060), 'substantial' (0.61 – 0.80), 'almost perfect' (0.81 – 1.00) and perfect agreement (1.00).

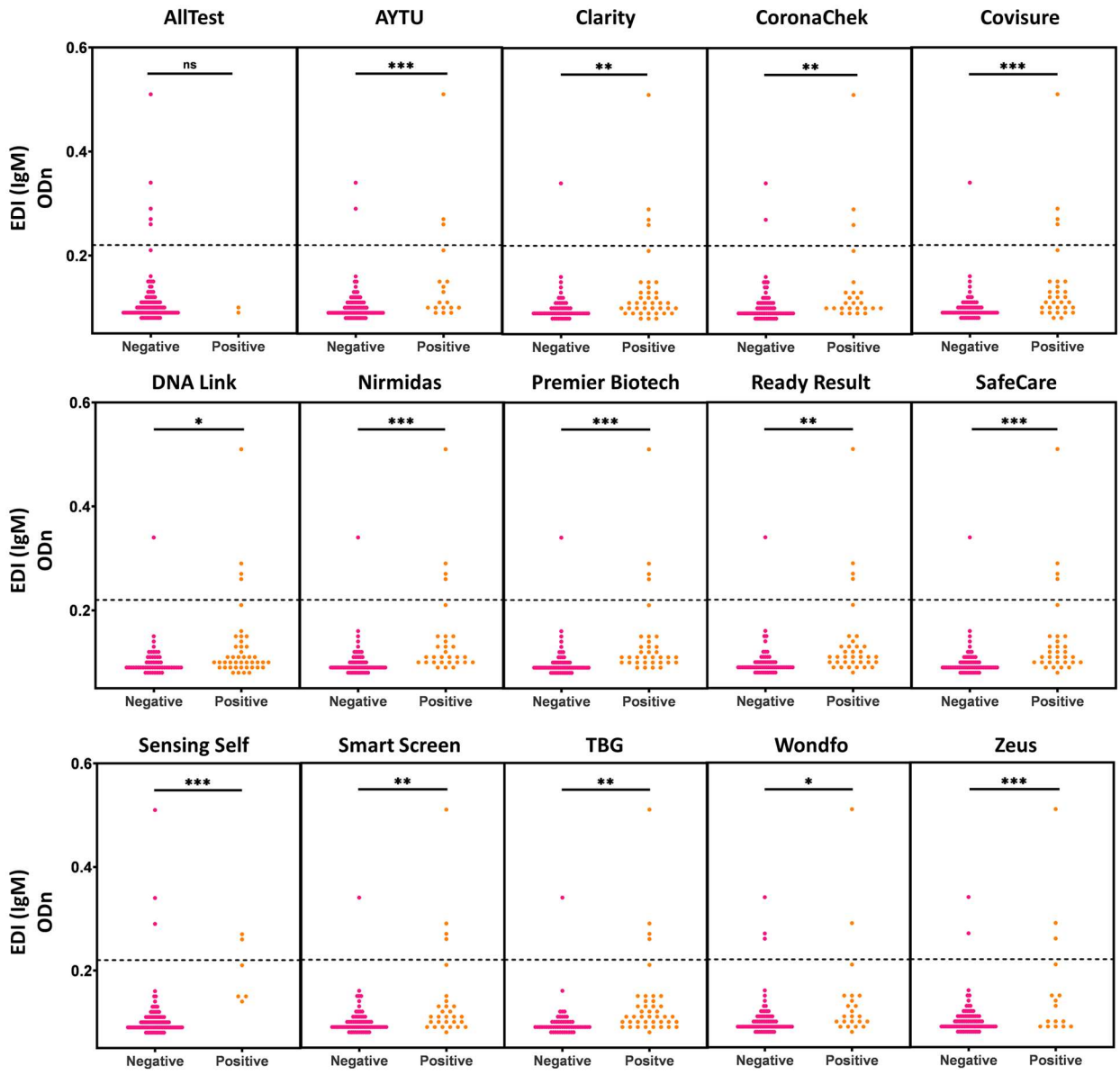

Figure S4. Comparison of IgM levels with LFA result. IgM levels were determined using EDI, where normalized optical densities (ODn) > 0.22 are considered positive, levels between ODn 0.22 and 0.18 are considered indeterminate, and ODn <0.18 are considered negative. Data suggests little variation in IgM concentration between positive and negative LFA results. Sample set included the 100 specimens used for prior assessment shown on **Fig. 2**.

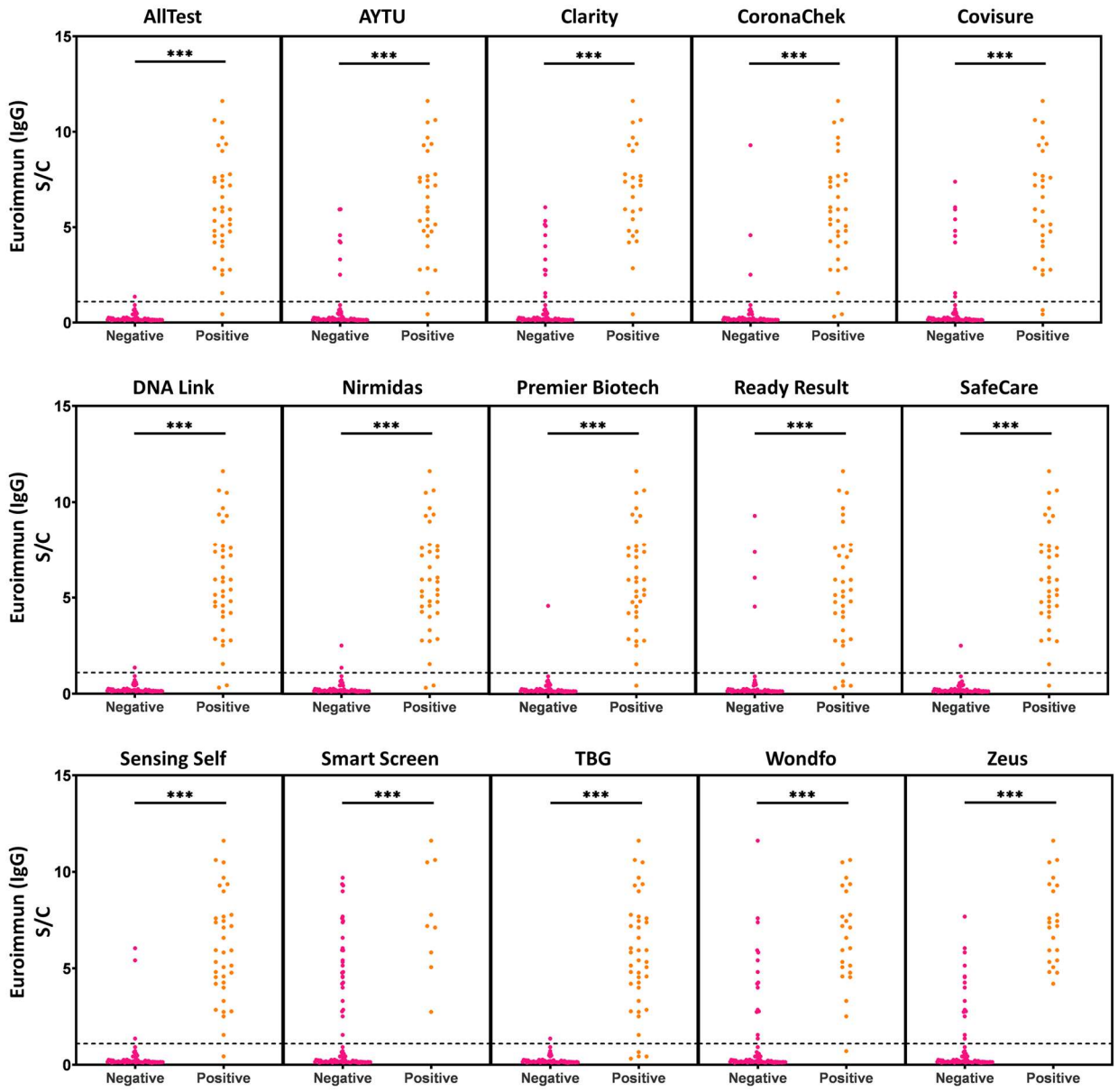

Figure S5. Comparison of IgG levels with POCT result. IgG levels were determined using Euroimmun, where signal to cut off (S/C) >1.1 S/C are considered positive, S/C between 0.8-1.1 are considered indeterminate, and S/C < 0.8 are considered negative. Based on this cutoff, data indicates the occurrence of false-negative results across all the POCTs evaluated. This observation is more prominent for Smart Screen, Wondfo, and Zeus. Contrary to the negative results, all positive POCT results were above the cutoff, and thus considered quantitatively positive. Sample set included the 100 specimens used for prior assessment shown on **Fig. 2**.